AQC0871

Nanopublication — Computational Image Analysis - AQC0871

by Arnaud Quercy · Db Major - Research on Harmony - Variations 14 · 2025

Claim 1: Computational Image Analysis - AQC0871

> K-means clustering analysis [3] (10 colors) performed on artwork Db Major [1] - Research on Harmony - Variations 14 (AQC0871) [2] by Arnaud Quercy [2] on 2025-12-11. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

CONTEXT

Analysis performed according to MMIDS-CMP-2025 [3] includes four metric categories: (1) Color distribution via k-means (10 colors), (2) Texture analysis using Haralick features, (3) Brightness and contrast measurements, (4) Spatial pattern characterization. Source image [5]: 1939x2908 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		7E9DB7	17.4	blue-violet	lightslategray
2		715A3F	15.0	orange	dark brown
3		6A7790	14.9	blue-violet	grayish purple
4		E8837E	11.1	red-orange	lightcoral
5		98D2C5	10.4	green	lightsteelblue
6		A3957C	7.2	yellow-orange	rosybrown
7		C1BEA2	6.9	yellow	tan
8		D74E4E	6.5	red-orange	indianred
9		E9E2BF	6.1	yellow	wheat
10		2A180F	4.4	orange	very dark gray
11		C7F1D1	0.3	yellow-green	gainsboro [Accent]
12		CC8F9F	0.3	red	rosybrown [Accent]
13		A6EAF9	0.3	blue-green	paleturquoise [Accent]
14		C9DBEA	0.3	blue	gainsboro [Accent]
15		AFAFC8	0.3	violet	silver [Accent]

Color Families:

Family	%
blue-violet	32.2
orange	19.4
red-orange	17.6
yellow	13.1
green	10.4
yellow-orange	7.2
yellow-green	0.3
red	0.3
blue-green	0.3
blue	0.3
violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
C7F1D1	yellow-green	gainsboro	22.8
CC8F9F	red	rosybrown	25.0
A6EAF9	blue-green	paleturquoise	22.8
C9DBEA	blue	gainsboro	9.5
AFAFC8	violet	silver	13.9

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.182
Mean Local Roughness	0.045
Roughness Uniformity	0.037
Edge Density	0.225
Mean Gradient Magnitude	0.354
Gradient Variance	0.157
Gradient Smoothness	0.0
Directional Coherence	0.005
Pattern Complexity	0.12
Pattern Repetition	1.0
Detail Frequency Ratio	0.655
Spatial Variation	0.072
Texture Consistency	0.833

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.56
Brightness Variance	0.182
Brightness Uniformity	0.676
Brightness Skewness	-0.357
Brightness Entropy	7.484
Rms Contrast	0.182
Michelson Contrast	1.0
Weber Contrast	0.555
Mean Local Contrast	0.049
Contrast Uniformity	0.222
Dynamic Range	1.0
Effective Dynamic Range	0.584
Shadow Percentage	8.188
Midtone Percentage	64.623
Highlight Percentage	27.189
Shadow Clipping	0.006
Highlight Clipping	0.022
Tonal Balance	0.173
Fine Contrast	0.024

Metric	Value
Medium Contrast	0.06
Coarse Contrast	0.086
Multiscale Contrast Ratio	0.282
Edge Contrast	0.354
Contrast Clustering	0.167

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.709
Color Clustering	0.516
Color Transition Smoothness	0.109
Transition Uniformity	0.0
Sharp Transition Ratio	0.1
Transition Directionality	0.005
Mean Saturation	0.366
Saturation Variance	0.031
Low Saturation Ratio	0.355
Medium Saturation Ratio	0.604
High Saturation Ratio	0.041
Saturation Clustering	0.997
Hue Concentration	0.169
Complementary Balance	0.258
Analogous Dominance	0.566
Temperature Bias	0.132

Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Multimodal Institute's computational imaging systems.

REFERENCES

[1] Arnaud Quercy (2025). Db Major - Research on Harmony - Variations 14 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0871.html

[2] Quercy, A. (2025). Db Major - Research on Harmony - Variations 14 - Gallery. https://artquamanima.com/en/artworks/2025/11/db-major-research-on-harmony-variations-14_hzv.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

`1911cfb5ed53860a352f1a0f27071a656aa95e-b9ac7b43e8a9e3b0d0c89e9de4`

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